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Original Articles.

A CASE OF CHRONIC LYMPHOID LEUKÆMIA WITH MUCH TEMPORARY BENEFIT FROM BENZOL TREATMENT.*

By H. D. ROLLESTON, M.D., F.R.C.P., and J. D. ROLLESTON, M.D.

A BOY, aged 6½ years, was admitted on December the 11th, 1913, to the Victoria Hospital for Children, suffering from general debility and swelling in the neck of eight months' duration.

Previous health.—He had had measles twice, the second attack eight months before admission and followed by pneumonia. Otherwise he had been exceedingly healthy.

The *family history* did not contain anything of importance.

History of present illness.—Eight months ago, during his recovery from the second attack of measles, his mother noticed several lumps in his neck, these got progressively larger, but were never painful.

On admission the patient was pale, anæmic, constipated, listless, and was obviously very ill. There were numerous hard enlarged painless glands in the cervical, parotid, submaxillary and occipital regions, axillæ and groins. There was some dyspnœa, but *x*-ray

* The case was shown on two occasions at the Royal Society of Medicine, 1914, vii, (Children's Section), pp. 71, 129.

examination of the mediastinum did not reveal any enlarged glands. The heart was slightly enlarged and a systolic apical murmur was present. The spleen was distinctly palpable on deep inspiration. The eyes were swollen and puffy, the forehead somewhat œdematous, and the superficial veins in that region dilated.

Examination of the blood pointed to lymphoid leukæmia—large lymphocytes being in great excess. The total leukocyte count was then 60,000.

On December the 29th, benzol treatment was commenced with an initial dose of ɱvi *per diem*. On January the 10th it was increased to ɱxii *per diem*, and on January the 25th to ɱxiv. This dose was continued until February the 12th, when the benzol was stopped altogether. The accompanying chart shows the progressive diminution in the total leucocyte count during the treatment. The patient's general condition appeared to be greatly improved; lassitude and weakness disappeared, his appetite improved, and the œdema of the head passed away. On the other hand the spleen remained practically unchanged in size, the glandular enlargement did not become less, and the patient did not put on weight satisfactorily. After the benzol was omitted from the treatment the leucocyte count was still taken weekly and at one time was as low as 2900. About a week after the benzol had been stopped, a purpuric rash appeared on the forehead. As benzol poisoning causes purpura hæmorrhagica, this rash was regarded as a manifestation of mild benzol poisoning. On March the 4th, as the patient appeared to be extremely well and was running about the ward all day, he was transferred to the Convalescent Home at Broadstairs. On April the 2nd he was re-admitted to hospital. The lymphatic glands were found to be distinctly harder and a trifle larger. The patient's general condition was decidedly worse. He was exceedingly languid and very dyspnœic.

The total leucocyte count was 123,000, the small lymphocytes being the predominant cells present. Benzol ɱix *per diem* was again given, and in ten days' time the count had fallen to 15,000. This marked decrease was also accompanied by an improvement in his general condition. On April the 16th, the benzol was again omitted, and on April the 20th, the leucocyte was found to be 20,000, and on April the 30th, 29,400.

On May the 11th the child was put on benzol ɱxij *per diem*, but later in the day the temperature rose to 101·2° F.; the whole face became œdematous, with a purpuric rash on the right cheek and an offensive nasal discharge. A culture from the throat showed the presence of numerous diphtheria bacilli, and the child was therefore

transferred on May the 13th to the Grove Hospital, Tooting, where 15,000 units of anti-diphtheritic serum were given. A smear from the mouth showed a very various flora, chiefly cocci, only a few fusiform bacilli and spirilla, not more than would be found in any infective condition of the mouth. No diphtheria bacilli were found in smears or cultures from the mouth or nose. The condition of the face suggested cancrum oris, and, though the stomatitis improved considerably under the local application of salvarsan, the child passed into a septicæmic state and died on May the 20th. Blood-examination by Dr. E. B. Gunson showed a well-marked leucopenia —1400 leucocytes on May the 14th and 1600 on May the 15th.

At the autopsy on May the 21st there was no obvious enlargement of the submaxillary, cervical, tracheo-bronchial, or mesenteric lymphatic glands. The epiglottis was much thickened and so were the ary-epiglottidean folds. The lungs were normal. The heart was normal except for some thickening of the mitral valve. The liver (29¼ oz.) and spleen (2 oz.) did not show any obvious change. Kidneys (3 oz. each) were pale, with numerous small hæmorrhages on the surface.

A microscopical examination of the organs was made by Dr. Stanley Wyard, who reported as follows :

" The submaxillary gland, the liver, and the mitral valve were all normal. Nowhere throughout any of the specimens is there any leucocytic infiltration such as is found in lymphoid leukæmia. The kidneys show cloudy swelling, the change being most marked in the cells lining the tubules as far as and including the descending limb of the loop of Henle. The glomeruli and the blood-vessels appear quite normal. The spleen presents no abnormality except that the perivascular spaces are very densely packed with lymphocytes. The epiglottis is thickened by an increase in the fibrous tissue and a small round-celled infiltration of its anterior surface. The bone-marrow contains very few cells and their place seems to be taken by a fibrillar substance showing affinity for acid stains. The origin of this fibrillar substance is apparently from a few multipolar cells which send out branches in all directions. A few leucocytes are present, but the majority of the cells are large and round, with a small nucleus—the ordinary marrow-cell. No myeloplaxes can be found."

It should be added that the lymphatic glands showed considerable endothelial proliferation which did not appear to one of us (H. D. R.) to point to lymphadenoma. Some writers would probably regard the change as " myeloid transformation," but it is probable that this

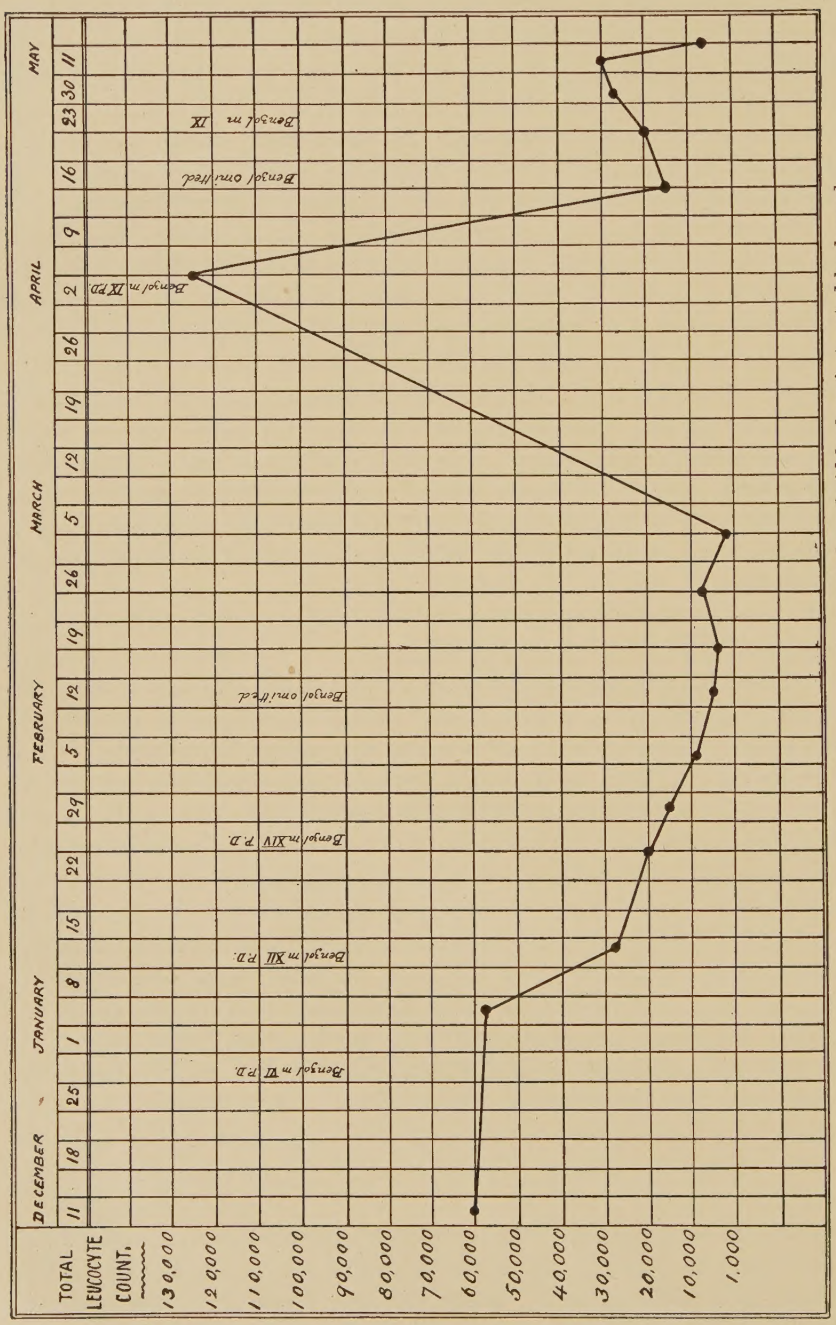

Chart showing the total leucocyte count in a case of chronic lymphoid leukæmia treated by benzol.

Table showing the Blood Counts at Intervals during the Treatment.

	Total leucocytes.	Lymphocytes.		Polymorphonuclears.		Hyaline.	Transitional.	Myelocytes.	Hæmoglobin.	Total reds.
		Large.	Small.	Neutrophils.	Eosinophils.					
1913.		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.		Per cent.	
December the 11th	60,000	54	16·5	25	0·5	3	1	1 seen	—	—
1914.										
January the 5th	57,000	53	30	13	0	3·5	0·5	0	—	—
„ „ 12th	26,000	41·5	46	10	0	1·5	1	Large number	40	4,300,000
„ „ 23rd	20,000	26	24	39	1	7	3	1 seen	50	3,560,000
„ „ 29th	15,000	18	44·5	29	1	4	3·5	3 seen	45	3,368,000
February the 5th	9,000	39	29	27	1	3	1	1 seen	50	3,462,000
„ „ 12th	4,500	28·5	34	32	0·5	2	2·5	1 seen	60	3,300,000
„ „ 18th	3,400	41	12·5	39·5	2	3·5	1	2 seen	55	5,000,000
„ „ 25th	7,000	51	14	34	0	1	0	0	—	4,500,000
March the 4th	2,900	32	29·0	35	0·5	1	2·5	4 seen	60	3,856,000
April the 4th	123,000	19	38	43	0	0	0	7 seen	62	5,000,000
„ „ 15th	15,000	19	41	35	0	4	1	2 seen	58	4,384,000
„ „ 20th	20,000	25	39·5	32	1·5	1	1	0	70	5,024,000
„ „ 30th	29,400	39	35	22	2	2	0	7	55	4,804,000
May the 11th	30,000	35	50	14	1	0	0	0	50	4,000,000
„ „ 14th	1,400	—	—	—	—	—	—	—	—	—
„ „ 15th	1,600	—	—	—	—	—	—	—	—	—

proliferation of the endothelium lining the sinuses and covering the trabeculæ may lead to the production of large lymphocytes.

Remarks.

The treatment of leukæmia by benzol was originated by von Korányi (5), who based it on Selling's (9) clinical and experimental observations that benzol poisoning produces leucopenia which persists after the cause is removed. Clinically, benzol poisoning produces purpura hæmorrhagica, aplastic anæmia, almost complete absence of blood platelets, and progressive leucopenia. In Selling's two fatal cases the total leucocytic count fell to 480 and 140 per cubic centimetre. Benzol appears to inhibit the leucoblastic tissues.

Barker and Gibbes (1) have recently collected fourteen cases of myeloid and three cases of lymphocytic leukæmia treated with benzol, and since then Parkes Weber (11) reported the failure of benzol in a man with myeloid leukæmia, and Calvert (3) a case of chronic lymphoid leukæmia successfully treated with benzol; in his patient, a man, the total leucocytic count gradually fell from 128,000 to 6000. Korányi, at the International Congress in London, 1913, referred to eighty known cases of leukæmia treated by benzol and to twenty-three papers on the subject. The effect of benzol appears to be less rapid than that of *x*-rays exposures. Milne's (6) experiments on dogs showed that in small doses benzol stimulates both erythroblastic and leucoblastic tissues. If these doses are persisted in for some time the leucoblastic tissue is worn out and the leucocytes decrease. Clinically he tried the treatment in seven cases though in only three did he continue it long enough to justify any conclusions. He found that it acted equally well both in the lymphoid and myelogenous types. In moderate doses it not only destroyed circulating leucocytes and prevented the formation of new cells in the leucoblastic tissues, but also stimulated erythrocyte formation and so tended to increase the red cell and hæmoglobin counts. It was not, however, definitely curative, as a relapse soon occurred when the drug was stopped. He thought the treatment should be avoided when the case was very acute with fever and a very high count, also in nervous subjects and particularly in cases with a high degree of leukæmic retinitis.

The terminal leucopenia in the present case, though remarkable, is not unparalleled. Spiegler (10) has recently reported a case and quoted others from the literature in which the leucocytes in myelogenous leukæmia dropped almost to zero before death. In Spiegler's

own case they numbered 1400 and then 400, and in two others they fell from 998,000 to 1720 and from 56,000 to 5300 and then to 200.

The occurrence of bucco-pharyngeal lesions in leukæmia which formed the terminal episode of the present case has received special attention from Continental writers. Gilbert and Weil (4) describe pseudo-scorbutic and anginal forms of leukæmia; Wechselmann and Hirschfeld (12) state that noma may be a prodromal symptom, the blood changes occurring later. A case of Vincent's angina with destruction of the uvula (7) recently reported by one of us (J. D. R.) which died four months later of lymphoid leukæmia was probably an instance of this kind. Boudet (2) has found from a study of the literature that stomatitis or angina exists in 66 per cent. of the cases. In sixty-one cases there was stomatitis only, and in thirty-six angina only, and in twenty-one both affections coincided.

The presence of diphtheria bacilli in gangrenous conditions of the mouth and throat which clinically cannot be regarded as diphtheria has been noted by one of us (J. D. R.) in a previous paper (7). It is not probable that they played any considerable part in the morbid process in the present case and, as already stated, were soon outgrown by the other organisms, as they were no longer present when the child had been transferred to the fever hospital.

Though several cases of cancrum oris have been attributed to the symbiosis of Vincent's fusiform bacilli and spirilla, these organisms were by no means predominant in the present case. This may in some measure account for the fact that the local condition though improved did not yield so rapidly to the action of salvarsan as when the process is entirely due to Vincent's organisms (8).

We are much indebted to Dr. Ross, lately house-physician at the Victoria Hospital for Children, for the notes and charts of the case.

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INFECTION OF MIDDLE EAR WITH VINCENT'S ORGANISMS.

By James Adam, M.A., M.D.,
Aural Surgeon, Glasgow Royal Infirmary Dispensary.

Hitherto infection with Vincent's organisms—spirochætes and fusiform bacilli—has been mainly recognised in connection with the upper air passages. Lately these organisms have been found in corneal ulcer (2), but I had not heard of them as affecting the ears when I showed two cases at the meeting of the Scottish Oto-laryngological Society last June. Dr. J. D. Rolleston, however, informs me that R. Johnson Held (3) has reported a case of chronic suppurative otitis media due to these organisms; a radical operation was performed with resulting meningitis and death. Yates (6) has also reported a case.

At the request of the Editor I subjoin my experience of the infection. The first three cases belong to Glasgow and were seen at the Dispensary of Glasgow Royal Infirmary during 1914. For the bacteriological reports I am indebted to the assistant pathologist, Dr. J. A. G. Burton.

(1) On January the 6th a boy, aged 6 years, was brought by his aunt. He had been deserted by his mother so that no history prior to July, 1912, could be obtained. Both ears had been suppurating before that and continuously since. From both ears issued a profuse, foul-smelling, blood-stained discharge; there was erosion of the meatus and adjoining parts of conchæ; the external canals were plugged with angry-looking, bleeding granulations; the parts were very tender. One small gland could be felt behind the left sterno-mastoid. Swabs from the throat were negative except for one small colony of *Staphylococcus albus*; films from a swab from the ear showed, in profuse growth, fusiform segmented bacilli and spirochætes, also Gram-positive cocci, probably pneumococci. Culture gave a profuse growth of a coliform bacillus. Many remedies were tried, including salvarsan locally, with little effect. The best results were got from painting the eroded surfaces with 5 per cent. silver nitrate in sp. æth. nitr., cleansing, instillation of tr. iodi, and latterly and especially with instillation of ethyl-violet and brilliant-green, each in 0·1 per cent. watery solution. After three months' treatment the granulations cleared up and the discharge ceased. When the tympanum could be inspected it was found that malleus, incus, and

most of the tympanic membrane in both ears, were gone. Hearing for whisper : Right ear, 8 ft.; left ear, 12 ft. The ears remain dry at the date of writing (December the 2nd).

(2) A rachitic child, aged 22 months, was brought on April the 29th with double aural suppuration of ten months' duration, and nasal catarrh of twenty. The clinical and bacteriological findings were a replica of the preceding case; here also pneumococci were found. The glands were enlarged on the left side of neck. On May the 6th no fusiform bacilli were found; a few spirochætes; on May the 22nd pneumococci alone. No Vincent's bacilli were ever got from the naso-pharynx. As the discharge still persisted from the ears the child was admitted into the wards and after eight days' further treatment I resolved to operate, but this was declined and the patient removed. On November the 24th I induced the mother to bring the child again to the Dispensary and found the ears in much the same condition as at first except that there were less granulation and erosion; there was marked fœtor and the Vincent's organisms had returned as verified by Dr. John Teacher, pathologist to the Infirmary. Treatment: The silver solution was applied to the erosions as in the preceding case together with instillation of tr. iodi and of ethyl-violet and brilliant-green solution. This child's twin brother was brought with it to the hospital in April suffering from nasal catarrh and suppuration from the right ear of a year's duration. There was no erosion of meatus, no granulations, no Vincent's organisms and no history of throat affection.

(3) A woman, aged 45 years, came in the beginning of July with a history of pain and discharge from the right ear of ten weeks' duration. The meatus was plugged by a necrotic, bleeding polypus. When this was removed the meatus was still crowded with bleeding granulations. The fœtid discharge gave Vincent's organisms. There was pain in the sterno-mastoid region. Instillation of ethyl-violet and brilliant-green was at once begun. On the 16th she was admitted to the wards as she was still complaining of pain in the sterno-mastoid region. By this date Vincent's organisms could no longer be found, though pneumococci and staphylococci were still plentiful. On the 21st I removed large masses of granulations; there was profuse bleeding. By the 29th the discharge was much less; the swab showed a few *Micrococci catarrhales*; cultures yielded practically nothing. It was thought, however, in view of the history of pain that a mastoid operation would be advisable, but the patient would not submit and left hospital. This woman has left Glasgow, but so far as can be ascertained she has required no further treatment.

(4) Just as I am writing this (December the 2nd) the School Board of Hamilton has sent me a girl, aged 8 years, who has had suppuration of left ear for at least six months. The meatus and canal are swollen and very tender, tending to bleed. Swab gave the characteristic organisms and pseudo-diphtheria bacilli (Dr. Hume Paterson, bacteriologist to Lanark County Council). After cleansing the canal, into which one can look only a short distance owing to the walls being nearly in apposition from swelling, there are seen spots of whitish membrane covering the most inflamed parts of the canal. This membrane reminds one of that seen on the tonsils in Vincent's angina. I had noted the merest suggestion of it in the other cases because in these the whole picture was dominated by the crowding granulations.

The negative features common to these cases are: Absence of much disturbance to the general health, absence of pyrexia, absence of any history of throat infection, absence of the special organisms in swabs from the throat, absence of special infectivity (for in no case was there any history of a similar affection in the same family, even in the case of the twins one of whom had also a suppurating ear).

The positive features in common are: The constant presence of Vincent's organisms, the frequency of the pneumococcus as compared with other bacteria (three times out of four), chronicity, stinking and profuse discharge, masses of profuse and readily bleeding generations in the more pronounced cases, erosion of the external parts of the ear, slight tendency to the formation of membrane, though it is probably always present at some stage but not readily visible owing to the anatomy of the parts and predominance of granulations, erosion of the external parts of the ear, and slight glandular enlargement.

It would be rash to infer from these few cases that this infection of the ear may not be highly dangerous, but in these four cases it has proved to be a local infection, locally virulent yet amenable to appropriate treatment. In a site locally dangerous like the ear any infection may become dangerous; but where there are no urgent symptoms of intra-cranial danger it would seem advisable to postpone serious operative measures till a fair trial had been made of the treatment above indicated. In that the solution of ethyl-violet and brilliant-green holds the chief place; for my knowledge of these I am indebted to Dr. Carl Browning, formerly clinical pathologist to Glasgow Western Infirmary and now of the Middlesex Hospital, and also to his assistant Dr. J. W. Mackie. The ethyl-violet, I believe,

they had found specially useful against pneumococcal infections of the eye, which induced me to try it in these Vincent infections. Oddly enough, the pneumococcus survived after the Vincent organisms had disappeared. Possibly it might have succumbed to a stronger solution of the ethyl-violet alone; but I have found the above mentioned combination in very much weaker solution highly irritating to some nasal mucous membranes. Still, it is worth keeping in mind for the typical Vincent's angina which I have had no opportunity of treating with this agent and for which salvarsan, although it failed in these ear cases, has hitherto proved the most potent application.

Probably infection of the ear with Vincent's organisms is more common than has been supposed, else it is not likely that three cases would have turned up at one hospital in six months. The condition for which one is most apt to mistake it, as in the case of the throat, is diphtheria.

At first I was inclined to think that this Vincent infection was primary, but Case 2 in which it disappeared, or seemed to disappear under treatment, and was found four months later to have recurred, suggests that Vincent's infection is a graft on another infection, here mainly pneumococcal. The history of the other cases points to the same conclusion. Indeed, consideration, not only of the clinical history, but of the social environment of these cases impels one to think that Vincent's infection of the middle and external ear is a graft on other affections resulting from gross neglect. One case had been deserted by his mother and had had no attention to his ear for at least two years after its onset; the twin child was neglected because he was a twin and his mother had her hands more than full of numerous other small progeny; the remaining child, although her ear has been discharging for more than six months, would not yet be under treatment but for the School Board; the adult might have been the mother of Dickens' "Fat Boy." Clinicians can hardly help thinking that the constant occurrence together of spirillar and fusiform baccilli in this infection is less likely to be a symbiosis of two entirely different organisms than different life-stage forms of one organism, and G. H. Cocks (1) in a very complete paper on Vincent's angina, says that "recently Ruth Tunnicliffe's studies have apparently proved that the two are different forms of the same organism. The organism is extremely polymorphous and presents many intermediate forms between the typical spirillum and the fusiform bacillus," a remark I can corroborate. Ellerman, Weaver and others (4) claim to have been able to make cultures of the fusi-

form bacillus. It is probably because these organisms fail to grow on ordinary culture media, though they can be detected readily in smear preparations, that the diagnosis has been frequently missed and the disease in the ear, as formerly in the throat, has been regarded as rarer than it really is. It will be seen that in respect of comparative rarity, of lack of contagion, of slightness of constitutional symptoms, and of favourable prognosis, the condition as affecting the ear resembles that in the throat as described by Dr. Rolleston (5) in this JOURNAL.

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(5) ROLLESTON, J. D.—BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, vii, p. 299.

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Postscript.—Since writing the above I have had three other cases, all in children, and all showing erosion of the external auditory canal. In addition to Vincent's organisms other bacteria were present.

PERFORATION OF THE ARCH OF THE AORTA BY SAFETY PIN IMPACTED IN THE ŒSOPHAGUS.*

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A FEMALE infant, aged 10 months, was admitted to the North Eastern Hospital, Tottenham, February the 18th, 1912, certified to be suffering from scarlet fever.

History of case.—No previous illness. Sore throat February the 16th. Rash on chest on the 17th.

Condition on admission.—No rash, fauces normal, tongue furred. Temperature 100° F. Pulse 120. Respirations 48.

As the diagnosis of scarlet fever was not confirmed on admission the child was sent to an isolation ward. It was seen late again the

* A specimen of the case was shown at the Section for the Study of Disease in Children of the Royal Society of Medicine, on December the 11th, 1914.

FIG. 1.—Showing pin in œsophagus. The opening made by the pin has been slightly torn in mounting the specimen.

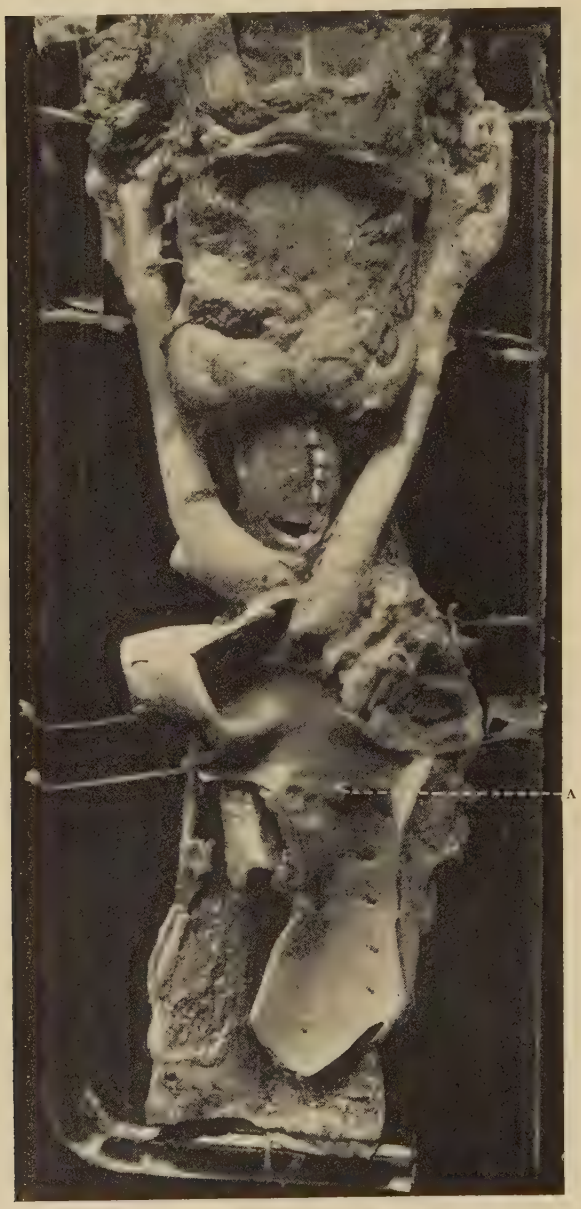

FIG. 2.—Showing opening (A) made by pin point in aorta.

same evening, when the nurse reported that it was fretful and had vomited a little milk after each feed. At 12.30 p.m. the next day, February the 19th, the child vomited after a feed of milk, brought up a quantity of blood and died.

No definite information could be obtained from the parents about the child's illness.

The child had been left almost entirely in the care of a grandmother, who had never missed the safety pin, which was one of a type used to secure the child's napkin.

The condition was not diagnosed ante mortem.

From the investigations made for the purposes of the inquest, I came to the conclusion that the child had probably swallowed the pin about three weeks before death.

In Fig. 1 the œsophagus is shown, opened at the back, with a brass safety-pin *in situ* as found post mortem. The pin, which is $1\frac{1}{4}$ in. long, is open with the open end downwards. The catch half of the pin is seen in the œsophagus; the other half having passed through the œsophagus with the point downwards and forwards is not seen. The pin portion passes to the left of the trachea on a level with its bifurcation.

The œsophagus is perforated on its anterior surface about $1\frac{1}{2}$ in. from its upper extremity, the pin half, having passed completely through the wall of the œsophagus, is in a cavity which goes from the gullet to the aorta. The cavity is about 1 in. long by $\frac{1}{4}$ in. across. The walls of the cavity are thickened.

Viewing the specimen from the front (Fig. 2) there will be seen a perforation in the posterior wall of the aorta, with the point of the pin just appearing through the hole (marked A) in the interior of the artery. The aorta is perforated about $\frac{1}{2}$ in. below the origin of the left subclavian artery.

Death was due to hæmorrhage from the aorta owing to ulceration set up in its walls by the presence of the pin in the tissues between the aorta and gullet.

The bleeding was into the œsophagus. The stomach was full of blood which formed one large clot. There was little blood in the upper part of the small intestines. No blood, altered or unaltered, was found in the large intestines. The heart and blood vessels were practically empty. All the tissues were pale and bloodless.

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, December the 11th, 1914.

The President, Mr. T. H. Kellock, *in the Chair.*

? Aortic Disease.—Dr. F. J. Poynton.—The interest of the case lay in the entire absence of any history of heart disease or cause for heart disease except tonsillitis, and in the exact interpretation of the physical signs.

A boy, aged 5 years, was sent to hospital by school medical officer for heart disease. For two years the mother had noticed that the child soon got tired and breathless on exertion. No history of rheumatism in child or parents. No fever. Tonsils very large and almost meeting. Pulse somewhat irregular, 84, and *strikingly small in volume.* Heart: No apparent enlargement, and the impulse not forcible. Apex: First sound short, and systolic murmur. Aortic cartilage: Rasping systolic murmur conducted upward and outward. No thrill over its maximum. The murmur, traced towards the apex, got fainter, and then the apical murmur was heard increasing in intensity to the apex. It would seem that these were two different systolic murmurs. The basal murmur could be heard at the pulmonary base, but was fainter there than in the aortic region. The child in other respects did not seem to have any signs of illness.

Nine patches of Morphœa in a Child.—Dr. J. L. Bunch showed a girl, aged 11 years, who had developed the first lesion a few weeks ago just below the left iliac crest. It had showed itself as a dense yellowish-white, small patch, with no suspicion of redness or coloured border, and had retained these characteristics while spreading to its present size of $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in. The outline was sharp and the skin was distinctly harder than the healthy skin surrounding it. Eight other similar but smaller lesions had since appeared on the chest, back, and shoulders. The face was free. The sweat glands did not appear to function over the area of these lesions. None of the lesions showed any sign of coalescing. The number, distribution, small size, and rapidity of development of the lesions seemed to bring the case within the category of the rare disease morphœa guttata, or white-spot disease. There was no evidence of peripheral neuritis or ganglionic lesion.

Generalised Ichthyosis.—Dr. J. L. Bunch showed a girl, aged 8 years, in whom the disease had been present since birth. The extensor surfaces were most affected, but the flexor aspects and the face to a less extent were also involved. The epidermis was thickened and pigmented, the surface was covered with a coarse scaliness, and there was pronounced follicular keratosis. The skin was dry, harsh, and rough, wanting in elasticity, and the natural lines of the skin were exaggerated. The dirty-greyish appearance of the skin could not be removed by any external applications.

Subjective symptoms were practically absent.

Case of Myatonia Congenita with Dilatation of Colon.—Dr. G. A. Sutherland showed a male infant, aged 2 years, who had been admitted for an abdominal swelling. Bowels usually constipated; recently motions loose, scanty, offensive. A large swelling occupied the right side of the abdomen and extended into the iliac region on the left side; apparently fæcal. Anal orifice very small and tight. X-rays showed great dilatation of colon. Abdominal mass removed by enemata, etc., and sphincter ani forcibly dilated. Great improvement as regards action of bowels and size of abdomen.

The child could sit up, but could not stand or pull himself into erect posture. He could stand with support. Muscles small and markedly hypotonic. Joints very flaccid. Knee-jerks not elicited. No marked rickets.

He was peculiarly apathetic and placid. He never talked, but babbled a little to himself. ? Mental backwardness.

Hypertrophy of the Gums.—Dr. Robert Hutchison showed a boy, aged 5 years, who had had enlarged gums all his life, which made it impossible for him to shut his mouth properly. The gums were greatly hypertrophied, the teeth being almost buried in them. Pus could be squeezed out from around some of the teeth. The boy seemed otherwise in good health.

Pulsating Tumour of the Scalp.—Mr. Philip Turner showed a girl, aged 18 years, with a pulsating swelling of the scalp, which had appeared shortly after a fall in which she struck her head against a concrete floor nine years ago. She was not unconscious after the fall, and there were no symptoms of concussion and no open wound of the scalp. The tumour had caused no symptoms, but had increased slightly in size. Three or four months ago the skin over the swelling ulcerated and became very septic, but there was no hæmorrhage; after treatment the ulceration soon began to heal. There was now a soft, pulsating swelling occupying the occipital region and extending nearly to the vertex. X-rays showed no opening in the bone, though the surface appeared irregular and grooved.

Cerebral Embolism in Diphtheria.—Dr. J. D. Rolleston.—A girl, aged 8 years, was admitted to hospital on October the 24th with severe faucial and nasal diphtheria on the third day of the disease. Large doses of antitoxin were given, and the throat became clean on October the 28th, but the same day the heart, hitherto normal, showed some dilatation and weakness of the first sound. The voice became nasal on October the 30th.

At 11.15 a.m. on November the 7th she retched, the respirations became rapid, the colour cyanosed, and a convulsive movement of the right arm and loss of consciousness ensued. Double ankle clonus and double extensor response were obtained. Both abdominal reflexes were lost, but the corneal reflex, though absent on the right, was active on the left side. A cardiogram showed premature ventricular contractions. Pulse, 115. On November the 8th the pulse was 160 and during short paroxysms rose to 240.

A specimen showed embolism of the basilar artery, of the superior cerebellar arteries, and to a greater or less extent of all the arteries entering into the formation of the circle of Willis—viz., the posterior cerebral, posterior communicating, internal carotid, anterior cerebral, and middle cerebral arteries. The lesions were much more marked on the right than on the left side. An ante-mortem clot was found in the left ventricle and a small infarct in the left kidney.

Pericarditis in Scarlet Fever.—Dr. E. B. Gunson.—A girl, aged 15 years, was admitted to hospital with scarlet fever, on the thirtieth day of disease. She had formerly had measles, chickenpox, and whooping-cough. She had never had rheumatic fever, but had had occasional "growing pains." On admission the temperature was subnormal. The patient was pale. The pulse was regular, with a rate of about 100 per minute. The heart was not enlarged. In the mitral area there was a short, sharp first sound, followed by a loud, rough systolic murmur, conducted to the axilla. Endocarditis was diagnosed, and the patient was kept in bed. The temperature remained subnormal until the thirty-fifth day, when it rose to 101° F. Slight pyrexia persisted. On the thirty-eighth day the pulse became irregular, owing to each alternate beat being due to a premature contraction. The arrhythmia persisted for two days only. On the fortieth day pericarditis developed, accompanied by arthritis. Death occurred on the forty-fourth day.

Post mortem, the parietal and visceral layers of pericardium were completely but loosely adherent by recent fibrinous exudate. When the layers were separated and the exudate was detached, numerous small subepicardial hæmorrhages were disclosed. The heart-muscle was pale. The cusps of the mitral and tricuspid valves were thickened and there were some recent vegetations on the mitral valve. The left auricle presented a patch of mural endocarditis. There were a few small patches of atheroma at the commencement of the aorta.

Microscopically the left auricle showed thickening of the endocardium, with areas of commencing necrosis, myocarditis, and organising pericardial exudate containing a number of irregularly dilated capillaries. The right auricular muscle presented a similar appearance; the endocardium was healthy. The left ventricle showed acute myocarditis of mild degree.

Perforation of the Arch of the Aorta by Safety Pin impacted in the Œsophagus.—Dr. E. L. Goffe (*vide* p. 44).

Pericarditis from a case of Scarlet Fever.—Dr. E. G. L. Goffe.—A girl, aged 9 years, was admitted to hospital on October the 9th, 1914, suffering from scarlet fever. There was a previous history of rheumatism. Condition on admission: Well marked punctiform erythema of trunk and limbs, fauces enlarged, cervical adenitis. Choreiform movements of face, right arm and leg. Temperature 102° F.

October the 26th: Double pericardial rub at base, presystolic and systolic apical bruit. Increased area of cardiac dulness. October the 31st, dulness increased. Choreiform movements marked.

November the 1st: Epistaxis, and difficulty in swallowing; 5 p.m., cyanosis, rapid breathing, restlessness. November the 2nd, 1.50 a.m., death.

A specimen showed the parietal and visceral layers of the pericardium completely covered with recent lymph, small recent vegetations on the mitral and aortic valves, and some hypertrophy of the myocardium. The other organs seemed normal.

Case of Liver Abscess in an infant, aged 5 weeks.—Dr. Eric Pritchard and Dr. E. Violet Turner.—The abscess was situated in the right lobe. No other source of suppuration was found. Pus from the abscess grew *B. coli* and a Gram-negative diplococcus. *B. coli* was also grown from the blood.

Abstracts from Current Literature.

Medicine.

A twin monstrosity of the third week of embryonic life (*'St. Petersburg. Med. Zeit.,'* 1914, XXXIX, *p.* 114).—**Ottow,** after some general observations on the rarity of these twin monstrosities, states that only three have been recorded between the fourth and sixth weeks of fœtal life. He describes one which could be certainly said to belong to the third week; it was found in an operation for a tubal pregnancy. The two individuals were united in the thoracic region and the yolk sac; they had grown unequally. A full description of the case is to be found in Volkmann's *'Samm. klin. Vortr.,'* 1914. M. D. EDER.

What is the cause of "physiological loss of weight of newly-born children"? (*'Jahrb. f. Kinderheilk.,'* 1914, LXXX, *p.* 21).—**G. Berestad** finds that the physiological decrease of weight of the newly-born is to be ascribed to an insufficiency of the whole process of metabolism, especially hydrogen metabolism. A failure of the gastro-intestinal function plays the greatest part in this insufficiency. The duration and extent of the loss of weight are dependent on the degree of development of the child, his initial weight, and the quantity of mother's milk. Artificial feeding increases and prolongs the decrease of weight. F. R. B. ATKINSON.

On the cause of death of children during labour (*'Wien. klin. Rund.,'* 1914, XXVIII, *p.* 239).—**Goldmann** reviews the causes of death of children during labour at the Heidelberg clinic from November, 1902, to May, 1911. Out of 4070 births there were 228 stillbirths; in 83 of these the heart was not heard at the beginning of labour. This leaves 142 who died during labour. As universally found, the mortality was greater among boys than girls—83 to 59. The causes of death were: Difficulties of the soft parts, 11; contracted pelvis, 31; placenta prævia, 24; premature rupture of the placenta, 3; eclampsia, 11; abnormal position, 20; prolapse of the cord, 4; strangulation by the cord, 5; syphilis, 9; maceration without lues, 7; premature birth, 4; monstrosities, 3; in caul, 2; cause unknown, 4; toxins, 1. M. D. EDER.

Laminar desquamation of the skin in the newborn (*'Semana Med.,'* 1914, XXI, *p.* 373).—**D'Ovidio** describes an infant three days old whose general condition was good, but in whom the skin was peeling in flakes. The skin had peeled from the scalp to the feet, the only normal part being the soles of the feet. The palms of the hands, the face, eyelids, etc., were denuded of skin. Beneath the epidermis the tissue was dry. In less than a month the skin had returned to a normal state. The condition corresponds with a skin-affection described as "fœtal ichthyosis" and is to be distinguished from that rare skin disease, dermatitis exfoliativa. D'Ovidio believes that the desquamation in his case had begun in the last days of fœtal life. The treatment consisted in a daily bath and the application of finely powdered talc. M. D. EDER.

Pemphigoid of the newborn (pemphigus neonatorum) (*'Journ. Amer. Med. Assoc.,'* 1914, LXIII, *p.* 1159).—**H. N. Cole** and **H. O. Ruh**

report an epidemic of nine cases of "infantile pemphigoid (pemphigus neonatorum)." A pure culture of the *Staphylococcus aureus* was isolated in all cases in which unbroken vesicles were to be found. In one case the termination was fatal, and a coccus was found in the internal organs at necropsy. The epidemic was started from a case of typical pemphigoid of the newborn, which later changed into a clinical picture of dermatitis exfoliativa neonatorum (Ritter), and as the ætiological agent in the two diseases is the same, no distinction should be drawn between them. Impetigo contagiosa seu vulgaris seu bullosa (streptogenes) should be sharply differentiated from infantile pemphigoid because of its different bacteriological origin. The authors think that infantile pemphigoid should be placed among the reportable diseases because of its severe epidemic characteristics and high mortality (from 25 to 50 per cent.), and that on account of the striking results obtained in this epidemic an autogenous vaccine should be used in all cases of the disease. T. R. Whipham.

Lumbar puncture in the newborn (*'Thèses de Paris,'* 1913–14, *No.* 398).—**E. Trouvellier.**—This can be performed with a Pravaz syringe or a special cannula and trocar devised by Devraigne. The operation is suitable both for diagnostic and therapeutical purposes, and should be performed whenever the infant is apparently dead or when convulsions or asphyxia are present. Not only is the existence of meningeal hæmorrhage revealed, but recovery is often effected by lumbar puncture. J. D. Rolleston.

Atrophy of infants and congenital lesions of the liver of the newly-born (*'Arch. de Méd. des Enf.,'* 1914, xvii, *p.* 399).—**H. Barbier** and **M. Cléret** find that heredity dominates the history of atrophy, as the majority of infants suffering from atrophy are descended from parents suffering from syphilis, tuberculosis, or alcoholism. The liver in some of these cases shows thickening of Glisson's capsule and is of a dark colour. The parenchyma is hard; in others the liver is pale, and shows some degenerated zones. The authors describe illustrative cases.

F. R. B. Atkinson.

Case of mucous plug in the rectum in a newborn infant (*'Riv. di Clin. Pediat.,'* 1914, xii, *p.* 401).—**A. Lorenzini** relates the case of a child who fell into a condition of apnœa soon after birth by vertex presentation. He had passed no meconium in spite of an oil and water enema. After a second enema a cord of gelatinous appearance was seen at the anal orifice which after traction by the nurse was found to be in continuation with an elongated fusiform mass. Its expulsion was followed by a certain amount of fluid meconium. The mass on examination was about 10 cm. long and 2 cm. thick at the middle, the extremities being $\frac{1}{2}$ and 1 cm. The surface was moist with transverse ridges, of a dirty white colour and greenish in parts. Microscopically it consisted of a cortical layer from the inner aspect of which arose intersecting trabeculæ converging to the centre and enclosing spaces filled with a substance allied to mucin. It seemed to be a mucous product analogous to that observed in the muco-membranous entero-colitis of adults but having altered cellular elements, probably of an epithelial nature. The author gives a bibliography bearing on these cases and woodcuts of the macro- and microscopical appearances.

Vincent Dickinson.

Umbilical infections (*'Med. Record,'* 1914, LXXXVI, *p.* 715).—**R. L. Vioran.**—These may occur in two ways: (1) through the umbilical wound after separation of the cord, (2) through the cord. The infections of wound and cord are due to saprophytic bacteria and may remain local, leaving a wound with exuberant granulations. The most frequent bacteria causing umbilical infections are the streptococcus, the *Bacillus coli* and the *Bacillus pyocyaneus.* The infection may be superficial or deep, forming the umbilical fungus, ulcer, pyorrhœa, omphalitis and periomphalitis leading to peritonitis and general septicæmia. The treatment for these conditions is the same as for infections elsewhere. In cases of umbilical erysipelas anti-streptococcic serum should be used. Erysipelas phylacogen is worthy of a trial. Ichthyol, with petrolatum as a base (20 to 40 per cent.), is of value as a dressing, frequently changed. Antitetanic serum is very efficacious in cases of tetanus of the newborn. The initial dose should be 1500 units and be repeated every twenty-four to thirty-six hours according to circumstances, together with hypnotics. F. R. B. ATKINSON.

Hæmorrhage in the newborn (*'Austral. Med. Journ.,'* 1913, II, *p.* 1357).—**A. G. McGowan** describes three cases, two of which died rapidly and one recovered. The death-rate, as a rule, is 50 to 60 per cent. No treatment did the first cases any good. In the third case normal horse-serum was given by the mouth with small doses of calomel; 10 c.c. of serum was given every day, and altogether about 40 c.c. was given.

F. R. B. ATKINSON.

Intra-cranial hæmorrhage in the newborn (*'Boston Med. and Surg. Journ.,'* 1914, CLXX, *p.* 682).—**R. M. Green.**—This may be due to the trauma of labour or may be associated with the hæmorrhagic disease of the newborn. Symptoms rarely appear before the second day and sometimes not till the fourth or fifth. The earliest are refusal to take the breast, pallor, and slight facial œdema. Typical signs of increased intra-cranial pressure may be absent. The diagnosis may be confirmed and relief afforded by lumbar puncture, if the hæmorrhage is infra-tentorial, or by puncture through a fontanelle or suture if the hæmorrhage is over the cerebral convexity. If these measures fail, decompression by craniotomy is indicated. Most intra-cranial hæmorrhages in the newborn are subdural, but intra-ventricular hæmorrhages may also occur. The bleeding may arise from laceration of the tentorium, the choroid plexus, longitudinal sinus, or pial vessels. Seven illustrative cases are recorded. J. D. ROLLESTON.

Melæna neonatorum (*'Der Kinderarzt,'* 1914, XXV, *p.* 145).—**C. Stamm** records five cases, four of whom were males. In four birth was normal and one was a forceps case. The melæna began on the first, second, third (two cases), and fourth days respectively. Hæmatemesis occurred in only one case. The forceps case died on the third day following birth, after an enormous intestinal hæmorrhage on the second day. The other four cases recovered. The melæna lasted usually two to three days. The necropsy of the fatal case showed anæmia of all the organs, subpleural and subdural ecchymoses, and an ulcer ·5 cm. long in the mucosa, 1 cm. below the pylorus. All these cases were treated with gelatin by mouth in rectal injections and subcutaneously. J. D. ROLLESTON.

Further blood-findings in melæna neonatorum (*'Jahrb. f. Kinderheilk.,'* 1914, LXXIX, *p.* 708).—**E. Lövegren** refers to his previous paper

(*vide* British Journal of Children's Diseases, 1914, xi, *p.* 126) and records two more cases. In the first the melæna began on the second day of life and was very severe. After an injection of 10 c.c. of gelatin the hæmorrhage at once ceased and rapid recovery resulted. The coagulation time during the bleeding was prolonged (two to three minutes). The red corpuscles showed no disposition to rouleaux formation and exhibited certain morphological changes, viz., early appearance of prickle cells and difference in size. When the melæna ceased these changes all disappeared. In the second case the melæna began at the end of the third day, was not severe, and ceased without treatment. The red cells were normal in size, showed good rouleaux formation, and no prickle forms, and the coagulation time was one minute. J. D. Rolleston.

Surgery.

A congenital malformation of the neck (*'Journ. Amer. Med. Assoc.,'* 1914, lxii, *p.* 451).—**C. A. Parker** reports the case of a girl, aged about 11 years, who had a peculiar deformity involving principally the skin on both sides of the neck. The deformity consisted of two symmetrical wing-like folds of skin extending from either mastoid region to the top of the shoulder. These wings had always existed to some extent and changed very little in appearance with muscular contraction. They interfered somewhat with the movements of the head, but it was more on account of the deformity that their removal was sought. The redundant fold of the skin was removed by an incision extending from the mastoid to the outer end of the clavicle on either side of the fold, leaving an elliptical wound, which, when closed, made a more nearly normal-appearing neck. On account of troublesome anæsthesia the two folds were removed at separate operations. The portion removed, beside the skin, contained fibrous tissue, in which were included some muscle fibres. No microscopic examination was made. The position of the fold, just behind the ear, was too far forward for the trapezius, and the bottom was too far out on the shoulder for the sterno-mastoid. An older sister had a congenital dislocation of the hip, and the patient herself later developed a dislocation of the patella, resembling the congenital type, which was cured by operation. T. R. Whipham.

Hygroma cysticum colli and hygroma axillare (*'Journ. Amer. Med. Assoc.,'* 1914, lxii, *p.* 522.)—**O. C. Smith** reports three cases. The first was a boy, aged 12 years, who for 2½ years had had a swelling in the left cervical region which enlarged rapidly after a blow by a snow-ball. The tumour was cystic in character and extended from the lobe of the ear nearly to the clavicle. The lymphatic glands were not enlarged. At the operation the cyst, which was found to be intimately connected with the parotid gland, was removed intact. It contained a clear watery fluid and the histological report was as follows: "The membrane lining the cyst is composed of flattened endothelial cells arranged in a single layer. The wall outside is made up of fibrous tissue and fat. In the fibrous tissue are numerous capillary blood-vessels and lymph spaces, the latter varying much in size, some being large enough to merit the name of small cysts. Scattered also in the fibrous tissue are numerous small areas of lymphoid cells. Surrounding the main cyst cavity in a narrow zone are small bundles of fibres morphologically like smooth muscle cells." The boy made a good recovery and there has been no recurrence. The second case was a man, aged 20

years, who for ten months had had a soft immovable tumour in the left axilla measuring 15 cm. in length and 8 cm. in breadth. It proved to be a thin-walled multilocular cyst and was easily dissected out. A hæmatoma somewhat delayed recovery; no recurrence. Case 3: A girl, aged 14 days, was delivered instrumentally and at birth was found to have a swelling of the size of a walnut in the left axilla. The mass grew rapidly to the size of an orange and was slightly movable on the chest wall. The lymphatic glands were not enlarged, but the arm was œdematous. This also was a thin-walled multilocular cyst and was attached to the skin. It was removed intact and the microscopical report was as follows: "Section shows many cysts of various sizes in supporting structure of connective tissue. The connective tissue is very vascular, with a few small areas of extravasated blood and clumps of fat-cells. The cyst walls in places are lined by a thin layer of endothelial cells. In most places this is lacking." Good recovery.

T. R. Whipham.

Cystic hygroma (*'Practitioner,'* 1914, xciii, *p.* 286).—**L. C. Panting** describes this case in a child, aged 8 months. The tumour extended from the mid-line of the neck in front to the mid-line behind on the left side, and from the lower jaw and the mastoid process above to the clavicle and on to the scapula behind. The tumour was removed in two stages with complete success.

F. R. B. Atkinson.

Hygroma of the groin (*'Journ. Amer. Med. Assoc.,'* 1914, lxiii, *p.* 1853).—**P. W. Roberts** reports the case of a boy, aged 16 years, who was sent with a diagnosis of a psoas abscess, to which clinical appearances pointed. There was present at the upper and anterior aspect of the right thigh a large tumour extending from the groin half way to the knee, with the characteristic feel of a tense abscess. On the outer side of the thigh there was a discharging sinus through which a probe could be passed to a point over the head of the femur. Examinations of the hip joint and spine were, however, negative, as were also röntgenograms of these parts. Nevertheless, the clinical picture was one of cold abscess. The swelling had enlarged rapidly, having developed in three months without pain or temperature, and there was no history of injury or infection. The patient was taken to hospital, and incision of the tumour resulted in the evacuation of about a quart of a clear, straw-coloured fluid which contained no pathogenic organisms. Exploration revealed a multilocular cavity extending to the ramus of the ischium without definite source of origin, the bone not being involved. There was no connection with the sinus on the outer side of the thigh. The cavity was lined with an extremely delicate membrane, but there was apparently no limiting membrane of a fibrous nature, the resistance of the muscles and fascia acting as a retaining wall. The cavity was thoroughly scraped and allowed to drain. A few days later a constriction half way toward the ischium closed and the upper end of the cyst rapidly refilled, necessitating a second opening, which was followed by scraping and the application of iodine. The sinus on the outer side of the thigh, which was probably the remains of a ruptured cyst, was also thoroughly scraped. Both cavities were treated with iodine, phenol, bismuth and argyrol, over a period of fourteen weeks without any attempt at healing from the bottom, although both contracted in circumference. There was still a free secretion of clear fluid. In view of the effect of the Röntgen ray on old tuberculous sinuses, the patient was given a four-minute exposure with a hard tube. At the end of ten days

both sinuses had begun to fill in at the bottom. Three other similar exposures at intervals of ten days completed the cure. The laboratory report on the scrapings removed from the cavity was not conclusive, owing, no doubt, to the fact that the specimen was taken at the second operation and did not include enough of the lining membrane to determine its exact nature. It would seem, however, that from the delicacy of the lining membrane, the multilocular character of the cyst, and the rapidity and force of its growth, the case should properly be classified under the head of hygroma.

T. R. Whipham.

Atresia recto-vesicalis (*'Cleveland Med. Journ.,'* 1914, xiii, *p.* 414).—**F. C. Henick** records a successful cure in a child, aged 5 months. Absence of the anus and the passage of fæces *per urethram* was noted 24 hours after birth. Littré's operation of left inguinal colostomy was performed and the child progressed satisfactorily, but the opening closed. The author's operation consisted of an incision made in the anal region. The finger, when introduced into this incision, passed directly into the bladder and when sharply bent and directed backwards into the rectum. The connection between bladder and rectum was then separated, the rectal wall turned in by chromic gut stitches and its lower end separated all round and brought down and stitched to the skin. The levator ani muscles were united in front of the rectum, and within ten days the excreta were passed through the proper channels. The author recommends operation within the first forty-eight hours of life. If the above operation fails Littré's colostomy should be performed.

Christopher Rolleston.

Ectopia of the bladder (*'Practitioner,'* 1914, xcii, *p.* 501.)—**A. Edmunds** describes a case in a girl, aged 12 years, and as a result of his experience finds that plastic operations merely for reconstruction of the bladder are unsatisfactory and that transplantation of the ureters is preferable. Transplantation of the base of the bladder is better than separate transplantation of the ureters; the operation is better done intra-peritoneally than extra-peritoneally. As most cases die of pelvic cellulitis, the wound should be left open.

F. R. B. Atkinson.

A congenital spermatic cyst (*'Semana Med.,'* 1914, xxi, *p.* 297).—**Rivarola,** in puncturing a swelling of the scrotum which he regarded as a hydrocele, found that the fluid was milky white with every appearance of a chylous fluid. The liquid coagulated slowly, but contained much fat and fibrin. There were few cells—lymphocytes and polynuclears—and no organisms. As the fluid returned radical cure was carried out. In the resected tissue the presence of a piece of epididymis could be made out. In the absence of any evidence of filaria the diagnosis of a congenital spermatic cyst seemed to agree best with the facts. The literature was searched in vain for any previous record of this kind.

M. D. Eder.

A case of lymph cyst of the mesentery (*'Boston Med. and Surg. Journ.,'* 1914, clxx, *p.* 536).—**C. S. Mixter** records a case in a girl, aged $4\frac{1}{2}$ years. The only symptom present was pressure upward upon the diaphragm. The small intestine had been transposed, the cæcum being pulled to the left side. Four quarts of fluid were removed from the cyst.

F. R. B. Atkinson.

A case of lympho-sarcoma with bacterial findings (*'Post Graduate,'* 1914, xxix, *p.* 500.)—**R. H. Bennett.**—The patient, a boy, aged $5\frac{1}{2}$ years,

had suffered from diphtheria four months previously; three months before, swelling of the left side of the neck occurred. A general glandular enlargement followed the attack of diphtheria. Two glands removed showed the presence of a diphtheroid bacillus. F. R. B. Atkinson.

Treatment.

Treatment of hæmorrhagic disease of the newborn by direct transfusion of blood (*'Journ. Amer. Med. Assoc.,'* 1914, lxii, *p.* 1866).—**V. D. Lespinasse** states that the chief causes of this condition are syphilis, infection, hypoplasia of the coagulating elements of the blood, and asphyxia. External factors, such as parity, the fœtal presentation, duration of labour, complications of labour, obstetric operations, and chloroform, are of minor importance. Syphilis, according to Holt, is a causative factor in from 2 to 6 per cent. of the cases, contrary to a generally current idea that syphilis is always the cause. The pathology of the condition is obscure, no lesions, as a rule, being found except hæmorrhages, though signs of syphilis, inflammation of the umbilical and portal veins, and acute fatty degenerations may be present. To check the hæmorrhage, replace the loss of blood, and overcome the infection, direct transfusion should be practised. The writer records a series of fifteen cases in which there were no deaths from hæmorrhage. Two patients died from syphilis five and nine days respectively after transfusion. Direct transfusion was made from the radial artery or a forearm vein into the femoral or jugular vein of the child for a period of from five to fifteen minutes. The rapidity of the flow should be regulated, as if the blood is allowed to enter the vascular system of the baby too rapidly there will be a temporary dilatation of the heart and the child will become cyanosed. When this occurs the blood-flow should be stopped until the red colour returns. T. R. Whipham.

Transfusion in the treatment of hæmorrhagic disease of the newborn (*'Bost. Med. and Surg. Journ.,'* 1914, clxxi, *p.* 715).—**R. M. Green** records five successful cases in which the infants' external jugular vein was used. By this method the mortality has been reduced from 50 per cent. to 10 per cent., and a still further reduction may be expected from its more prompt and universal application (*vide* British Journal of Children's Diseases, 1913, x, *p.* 228). J. D. Rolleston.

Purpura hæmorrhagica treated by blood-transfusion (*'Post-Graduate,'* 1914, xxix, *p.* 499).—**E. W. Peterson.**—Between 250 and 300 c.c. of blood were administered to a boy, aged 2½ years, and the tendency to bleeding ended abruptly and did not recur. F. R. B. Atkinson.

Anti-gonococcal vaccine in ophthalmia neonatorum and infection of adults (*'Policlínica,'* 1914, ii, *p.* 1042).—**V. D. Roch** records eight cases of gonococcal ophthalmia treated by anti-gonococcal vaccine (Burroughs and Wellcome), four of which occurred in infants aged from eight to thirty days, and the rest in adults. The infants received two to three injections, the doses ranging from 5 to 15 million gonococci. The results in every case were favourable. In only one case was the sight of one eye completely lost; in ten of the eyes the lesions healed completely, and in the remaining four a slight nebula was left. J. D. Rolleston.

Vaccine treatment in pertussis (*'Arch. of Ped.,'* 1914, xxxi, *p.* 586).—**D. M. Hartshorn** and **H. N. Moeller** review the literature and record their results in eighteen cases treated with a commercial vaccine made from a pure culture of the Bordet-Gengou bacillus. All but six, who showed no improvement, responded favourably to treatment. The authors recommend that in older children the initial dose should be at least 50 millions, which should be doubled at intervals of five days until a dose of 400 millions is reached. Cases which show no improvement should not receive more than four doses. J. D. Rolleston.

Vaccines in the prophylaxis and treatment of pertussis (*'Journ. Amer. Med. Assoc.,'* 1914, lxiii, *p.* 1007).—**A. F. Hess** reports the results of vaccine injections during an epidemic of whooping-cough in an infant asylum. Four different vaccines were used: (1) From a typical strain of the Bordet-Gengou bacillus and two atypical strains. (2) "Bacterin" (Parke, Davis & Co.), which is stated to be composed of a pure culture of the bacillus of pertussis. (3) From four typical cultures of the Bordet-Gengou bacillus isolated in the asylum laboratory. (4) An autogenous vaccine composed of three typical strains isolated from cases included in the epidemic. The results showed none was of value in curing or tempering the disease. Failure was not due to tardy inoculations, as many of the severest cases received not only early active treatment but also prophylactic vaccination. As a prophylactic measure vaccines offer greater promise, though the protective value cannot be compared with that of typhoid vaccine, as twenty out of 244 cases developed pertussis in spite of prophylactic inoculations. However, the proportion of unvaccinated children who developed pertussis so greatly exceeded the number of the vaccinated that the author concludes that the vaccine has protective value in a certain percentage of cases, and should be employed to prevent the spread of infection.

T. R. Whipham.

Treatment of pertussis (*'Arch. of Ped.,'* 1914, xxxi, *p.* 578).—**E. E. Graham** emphasises the following points: (1) Abundance of fresh air. The windows should be kept open day and night if the child is sufficiently ill to be kept in bed. If not in bed as much time as possible should be spent in the open air. (2) Careful attention to feeding and digestion. The feeds should be small and frequent; if vomiting occurs soon after food another feed should be given. Gastro-intestinal disease should receive early treatment. (3) Local applications to naso-pharynx. These are only useful in the early stages, when the infection is localised in the upper air-passages, and consist of applications of 2 per cent. silver nitrate to the naso-pharynx. The spread of infection to the deeper air-passages is thereby prevented. (4) Inhalations. Creosote and carbolic acid are generally employed. They act as a sedative to the mucous membrane and as a local antiseptic. (5) Drug treatment of the paroxysms. Belladonna should be given in drop doses of the tincture, *t.d.s.*, and the daily quantity increased by one or two drops till mild physiological effects of the drug are produced, when the doses must be continued cautiously. Antipyrin in doses of 2 or 3 gr. may be given morning and evening. Sodium bromide gr. v three to four times a day for a child of three years is often beneficial, and codeine, trional, heroin and chloral often allay cough and produce sleep when given either in single doses at bed-time or two or three times a day. Quinine lactate and hydroquinine intravenously or intramuscularly have given good results. Adrenalin

in three minim doses of the 1 in 1000 solution every four hours is said to arrest the number and severity of the paroxysms. (6) Suggestion. This may be a considerable adjuvant especially in neurotic children. (7) Vaccine treatment. This is unnecessary in mild cases, but is beneficial in some cases for children of all ages. J. D. ROLLESTON.

The use of vaccines in the treatment of chronic diphtheria carriers (*'Laryngoscope,'* 1914, XXIV, *p.* 804).—**A. I. Weil** treated twenty-four children aged from five to fifteen years, three of whom had suppurative otitis media containing the bacilli, beginning with a stock vaccine and continuing in the unsuccessful cases with a mixed vaccine obtained from the remaining positive cases which showed the greatest number of bacilli. The initial dose of the stock vaccine ranged from 20 to 40 millions and was increased every three or four days until a maximum of 400 millions was reached. Six doses were given to each patient. The initial dose of the mixed vaccine was 300 millions, which was rapidly increased to 1400 millions, five doses in all being used. These large doses did not cause a rise of temperature or any other sign of general reaction and were more efficacious than small doses. The result of the treatment was that the number of bacilli was markedly diminished, even when they did not entirely disappear.
J. D. ROLLESTON.

Treatment for diphtheria carriers (*'Med. Record,'* 1914, LXXXVI, *p.* 158).—**H. R. Miller** recommends spraying the throat with a solution varying in strength from $\frac{1}{4}$ to 1 per cent. of the usual 40 per cent. formaldehyde solution one hour before or at least two hours after food. The spray should be used every three or four hours except during sleep. From three to six days' treatment may be required. Miller records six cases, two of which occurred in adults and four in children aged from twenty-two months to twelve years. J. D. ROLLESTON.

Effect of lactic acid bacilli on diphtheria (*'Journ. Amer. Med. Assoc.,'* 1914, LXII, *p.* 510).—**S. T. Nicholson** and **J. F. Hogan** report favourably on the treatment of diphtheritic throats with lactic acid bacilli (Bulgarian type). In four cases the nose and throat were sprayed with a culture of the organism, and in five ordinary sour milk was used as a gargle for the throat and spray for the nose. The results were sufficiently encouraging to warrant a further trial of the treatment.
T. R. WHIPHAM.

The use of living lactic acid bacilli in diphtheritic throats (*'Journ. Amer. Med. Assoc.,'* 1914, LXII, *p.* 1779).—**E. V. Goltz** and **W. D. Brodie,** as the result of a further investigation, report that in cases in which the lactic acid bacilli were used there was no appreciable difference in the average time of quarantine from those in which the throats were treated in the ordinary manner with mild antiseptic gargles and various local applications. In the former, both Mulford's (Bulgarian type) cultures of living bacilli and naturally soured milk were used as a spray and as a gargle and nasal douche respectively. In the author's experience lactic acid bacilli hasten the disappearance of diphtheritic membrane, but do not destroy the bacillus.
T. R. WHIPHAM.

The use of blood-serum of immunes in treatment of malignant scarlatina (*'Arch. of Ped.,'* 1914, XXXI, *p.* 599).—**D. S. Barker** records

four cases in children, aged from 16 months to 5 years. Four injections of from 1½ to 6 drachms of serum taken from persons who had recently had scarlet fever were given. Three recovered, and one died without showing any benefit from the treatment. J. D. Rolleston.

The treatment of nephritis with adrenalin solution (*'Riv. di Clin. Pediat.,'* 1914, xii, *p.* 425).—**N. Fedele** in a communication to the eighth Pediatric Congress at Bologna in 1913 related four cases of nephritis in children, aged from four to nine years, with œdema and albuminuria who made a rapid recovery after the administration of twenty-five drops daily of the ordinary solution of hydrochlorate of adrenalin. He considers it an efficacious remedy whatever be the nature and form of the nephritis, as it does not cause any untoward effects and is applicable to persons of any age. Its activity is explained by the restitution of the deficit of adrenalin due to functional insufficiency of the organ. Vincent Dickinson.

Combined adrenalin and pituitrin treatment (*'Münch. med. Woch.,'* 1914, lxi, *p.* 1336).—**P. Rohmer** recommends the combination of pituitrin with adrenalin in the treatment of severe circulatory disturbance in acute infections such as pneumonia, diphtheria, or typhoid fever in children. Young children received injections of 0·25 cm. of 1 in 1000 pituitary extract combined with 0·5 cm. of 1 in 1000 adrenalin solution. Older children received double the dose without ill effects. The injections were usually given six hourly. The various suprarenal and pituitary extracts on the market were of equal value. J. D. Rolleston.

The out-patient treatment of rheumatic endocarditis (*'Amer. Journ. Dis. Child.,'* 1914, vii, *p.* 41).—**W. P. Lucas** and **M. H. Wentworth** write a thoughtful paper on this subject, in which they emphasize particularly the value of a "follow up worker," who visits the home to instruct the parents on the great importance of rest to the cardiac invalid. Their study of the subject, they admit, has awakened them to the very large number of children with cardiac affection, and the need for some systematic method of tackling the rheumatic problem. The figures published seem to suggest that rheumatic heart disease is much more common in America than a perusal of American text-books had led one to expect. Reginald Miller.

Treatment of vomiting infants and of marasmus by high doses of sugar (*'Arch. de Méd. des Enf.,'* 1914, xvii, *p.* 321).—**P. Nobécourt** controls the vomiting of infants by the addition of 10 per cent. ordinary sugar lactose or saccharose. This has a sedative action and evokes a considerable liquid secretion in the stomach which may diminish activity and consequently decrease any erosive action. Cachectic infants lose flesh rapidly, and therefore the loss of heat becomes greater. The consumption of albumin rises, and urea accumulates in the fluids of the body. An easily digested and assimilated food is therefore necessary. Fat and albumin are difficult to digest, while sugar is easily digested, and furnishes 4 calories to each gram ingested. Christopher Rolleston.

Sea-water (Quinton's plasma) by ingestion in acute gastro-enteritis of the newly-born (*'Le Nourisson,'* 1914, ii, *p.* 145).—**H. Triboulet** and **H. Godlewski.**—This method of employing Quinton's plasma is specially indicated in vomiting. Diplase, the plasma of Quinton concentrated with nearly double isotonic plasma, is diluted with two-thirds to three-

quarters of sugared boiled water, and given in 50–200 grm. at a time; if the diarrhœa be profuse this dose is given two or three times a day. Milk should be forbidden. If the first dose be vomited the stomach should be washed out and the dose repeated. The authors have had good results from this method. F. R. B. Atkinson.

The uses of petroleum in the treatment of constipation and other diseases in infants (*'Clin. Journ.,'* 1914, xliii, *p.* 439).—**E. Pritchard** was the first, he believes, to call attention to this remedy in constipation. His formula, used at the Marylebone General Dispensary, is: Paraffini liq. (B.P.) 33·0, acid benzoici, glusidi āā 0·05, olei cinnamomi, 0·10, decoctum chondri crispi, ad 100·00. It must be made in large quantities and be of good quality, and is expensive. Dose: ʒij after or with each feed, but ʒss. six or eight times a day may be given with safety. F. R. B. Atkinson.

Some cases of diarrhœa treated with culture of the Bacillus Bulgaricus (*'Arch. of Ped.,'* 1914, xxxi, *p.* 525).—**C. W. Berry** used tablets of the above bacillus, one four times a day or more according to the severity of the disease, and found that cases of summer diarrhœa, especially when due to putrefactive fermentation, were greatly assisted by their use. The quickest result was obtained by a proper balance of food and an initial dose of castor oil, together with the bacilli. F. R. B. Atkinson.

Hypertrophy of the thymus and the Röntgen rays (*'Monatsschr. f. Kinderheilk.,'* 1914, xiii, *p.* 69).—**W. Kaupe** believes that in cases of congenital stridor due to enlarged thymus the Röntgen rays should not be employed for the purposes of treatment. F. R. B. Atkinson.

Reviews.

Practical Pediatrics. By J. H. McKee, M.D., Professor of Pediatrics, Temple University, formerly Professor of Pediatrics in the Women's Medical College of Philadelphia, etc., and W. H. Wells, Assistant Professor of Obstetrics, Jefferson Medical College, etc. 2 vols. Pp. 1182. With 2 coloured plates and 146 illustrations. London: Henry Kimpton, 1914. Price £2 10s. net, in cloth, £3 3s. net, in quarter Persian.

This, the latest of American text-books on pædiatrics, has impressed us very favourably. It is a large, two-volume work, in which the authors have endeavoured to present the fundamental principles of development and lay stress on the prevention, as well as the recognition and repair, of abnormalities and disturbances. The book deals mainly with the medical diseases of children, though surgical affections are also considered, separate chapters being devoted to diseases of the genital organs and diseases of the ear. Special attention is also given to diseases of the skin, and, in a long appendix, which comprises over 150 pages, a variety of subjects concerning the child is dealt with. Here Dr. J. M. Taylor discourses in a general way upon such points as the conservatism of infantile life, hygiene, development, both physical and mental, heredity, the teeth, deformities, tubercu-

losis of the spine and joints, and the influence of the ductless glands on growth.

Taken as a whole the description of the various diseases is exceedingly good, and the treatment advocated is sound and up to date, vaccine and serum therapy and tuberculin treatment being discussed in a judicious and impartial manner. Where the general excellence is so high it is difficult to single out any particular sections for especial praise, though attention must be drawn to a short but interesting chapter on blood-pressure studies in early life, a subject which is not as a rule touched upon in text-books on children.

It is impossible, however, to avoid a certain amount of criticism, and in a work of this size and importance we consider that the description given of congenital hypertrophy of the pylorus is very inadequate, a single page only being devoted to the subject. Considering the importance of and the diversity of opinion which is held concerning this condition the description of it might well have been fuller, the question of medical *versus* surgical treatment have been discussed, and the advantage or otherwise of giving drugs included. In the treatment of intussusception we do not agree with the old-fashioned methods of injection or inflation of the bowel and manipulation of the abdomen which are advocated as preliminary measures. The risk attending them is too great. Neither do we think that if the case is not seen until after the first twelve or twenty-four hours "the efforts of the medical attendant should (merely) be directed to sustaining the patient, with the hope that the process of sloughing and evacuation of the strangulated portion will occur," the patient during this time being kept under the influence of opium. So also in appendicitis the authors are, in our opinion, too much inclined to temporise and do not emphasise sufficiently the danger of the disease in childhood. Although they state that "if the diagnosis of appendicitis is certain we believe that operation is indicated, preferably in an interval," they advocate in the early stages of the disease starvation, salines, and the use of the Fowler position and of the Murphy "drop-method." Later they employ morphine in conjunction with atropine "if suffering is very great," and "in the presence of severe vomiting calomel may be given in fractional doses, though again morphine may be required to quiet it," a procedure which most English surgeons would condemn. In speaking of general peritonitis as a sequela they state that "children sometimes recover from septic (general) peritonitis. In the latter condition of affairs death is almost certain, no matter what course is pursued"—two statements which are not quite compatible. Again, in the treatment of pneumococcal peritonitis palliative measures alone are advised, no mention being made of laparotomy.

In the chapter on diseases of the blood it is stated that the splenomedullary is the commoner of the two forms of leucocythæmia and that the lymphatic variety is rare, a statement which appears in more than one American text-book on children's diseases. While admitting that this is true of adults we cannot agree that it holds good in the case of children.

There are some omissions also to which attention may be drawn. Thus we looked in vain for some account of congenital acholuric jaundice, and could find no mention of such conditions as fragilitas ossium, myatonia, or cleidocranial dysostosis. Further, we should have liked to see a separate account of Still's disease instead of a passing mention under chronic rheumatism, to which the authors admit it is not allied.

The book, of course, contains some Americanisms, but the word "fluidram" offends one's English susceptibilities. Dr. Sambon's name is twice mis-

spelled, and, as is often the case in American text-books, there are several errors in Latin and numerous false concords in the writing of prescriptions.

In spite of these drawbacks 'Practical Pediatrics' is quite a sound text-book and one of the best produced by the modern American school. It is well bound and artistically got up. The illustrations, which are mostly reproductions of photographs, have been carefully executed and are admirable examples of the conditions which they depict. T. R. W.

THE INFANT NUTRITION AND MANAGEMENT. By ERIC PRITCHARD, M.A., M.D.Oxon., M.R.C.P.Lond., Physician to the Queen's Hospital for Children, Physician to Out-Patients, City of London Hospital for Diseases of the Chest, etc. 1914. London: Edward Arnold. Pp. 265. Price 3*s.* 6*d.* net.

THIS is an interesting and well thought-out book on the nutrition and management of infants. It does not pretend to deal with the whole subject, but is rather an exposition of the author's views on certain points concerning the management and nutritional disorders of children.

The author's personal experience of the management of breast-fed infants leads him to advocate that the interval between the feeds should not be less than three hours, and that infants should be put to the breast regularly from the very first in order to stimulate the process of lactation in the mother. When it is necessary to feed artificially young infants who cannot assimilate cow's milk Dr. Pritchard favours pancreatisation of the milk for six hours at least, pepsin, in his opinion, being useless. The period of artificial digestion may be lessened by ten minutes every day, so that in thirty-six days the infant will be taking completely undigested milk. In this connection cases are quoted showing how suggestion influences the child both as regards feeding and in other ways.

In considering the quantity of food which infants require, the author utters a word of warning against over-feeding slum-children. Such infants are usually too warmly clad and live in hot, ill-ventilated rooms, and in this way are deprived of those essential stimulants which evoke muscular movement and create a demand for food. The result is that over-feeding predisposes to a condition of acidosis with its attendant evils—diarrhœa, vomiting, and catarrhs. The main object of treatment should be to revise the hygienic surroundings of the child so that he may be able to assimilate a fuller dietary.

The chapter on the training of nerve-centres contains some useful suggestions concerning the regulation of the bowels and the stimulation of nerve-centres by gradually reducing the supply of artificial warmth and rapidly inuring the child to cold baths.

In dealing with constipation Dr. Pritchard advises the use of petroleum and condemns the custom of giving a new-born infant a dose of castor oil thereby depriving the intestines of the mechanical stimulus afforded by the presence of meconium. To this, in his opinion, more than to any other cause must constipation in infants be attributed.

The author's views on the ætiology of rickets are also interesting. He attributes the disease to a vicious cycle consisting of an inefficient action of the liver, which may be damaged by faulty feeding or be congenitally weak, associated with a disturbed central nervous system acting and reacting on one another. The bony changes are partly explained by acidosis, partly by the activity of the hæmogenetic functions of the marrow which are called for

by the existing conditions, and partly by the interruption of normal trophic impulses emanating from the central nervous system. Dr. Pritchard believes that many cases of rickets with marked bony deformity have a syphilitic taint, though his reasons for the belief are not very clear.

The foregoing will give some idea of the character of the book and of the subjects upon which the writer dogmatises. All his views may not meet with general approval, but at least they are deserving of earnest consideration as coming from a man of Dr. Pritchard's experience. T. R. W.

Ursache und Wesen angeborener Diathesen. Eine Experimentelle Studie (The Origin and Nature of Inborn Diathesis. An Experimental Study.) By Dr. Hans Eckert. Pp. 67. Berlin: S. Karger, 1913. Price 3·50 m.

At the German Medical Congress (Versammlung deutscher Naturforscher und Ärzte) held in Salzburg in 1910, Czerny set forth a new hypothesis on the nature of the exudative or lymphatic diathesis. According to Czerny, the diathesis is dependent upon an inherited and congenital defect in the chemical processes and composition (chemismus) of the body. Further, this defect affects especially those tissues which are marked by a relatively high water content. According to Czerny, the growth of the infant in the first year of life is not only more rapid than in later years, but it differs in nature because it is occasioned not so much by the addition of new tissue as by the retention of water. He illustrated his contention by a comparison with the growth of seedling plants which for some time is dependent upon the depôt of food substances with which the seedling is first equipped, and only later becomes proportional to the intake of substances from without. As is well known, in the case of the salts of iron this hypothesis of Czerny has the support of the work of Bunge, who, while he found a remarkable correspondence between the percentage composition of the ash of the mother's milk and the percentage composition of the ash of the body of the young animal in all constituents except iron, showed that in that one salt the ash of the body was about seven times as rich as the maternal milk. Bunge drew from this the conclusion that the young animal brings into the world with it a depôt of iron, probably stored in the liver, which served its needs during the time when it was nourished exclusively on milk which is apparently deficient in that salt.

In the present work Eckert has undertaken to test the truth of this hypothesis of Czerny, to seek proof of the existence of a depôt, in the sense of Bunge, of other constituents besides iron, and to determine whether the comparison to the manner of growth of a seedling plant can stand criticism by experiment.

Careful quantitative analysis carried out in six puppies from the same litter gave no support to the hypothesis of Czerny. The content of the growing animal body in the several constituents showed a steady increase, proportional to the diet. At no time was there a standstill or diminution in the amount, such as would occur if the assumption were true that a depôt inherited from the mother was undergoing gradual exhaustion. H. C. C.